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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/054,898      | 01/25/2002  | Satoshi Shinada      | Q67951              | 8316             |

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EXAMINER

NGHIEM, MICHAEL P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2861

DATE MAILED: 08/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/054,898

Applicant(s)

SHINADA ET AL.

Examiner

Michael P Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 50-52 and 57-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 60 is/are allowed.
- 6) ☒ Claim(s) 50-52, 57-59 and 61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 28 May 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/437,246.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

The Amendment filed May 28, 2002 has been acknowledged.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 50-52, 59, and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Barinaga et al. (US 5,777,646).

Barinaga et al. discloses all the claimed features of the invention including:

- an ink supply system (Fig. 9) for a printing apparatus (column 1, lines 55-59) providing ink to a printing head (column 9, lines 1-8) through a tapered ink supply needle (162), said ink supply system capable of providing ink contained in an ink chamber (24) to the print head through the ink supply needle (column 9, lines 5-8), comprising:
  - an ink channel (channel of 28) for providing ink from said ink chamber to the print head of the printing apparatus (Fig. 9);

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- a first member (104) provided at said ink channel (Fig. 9), forming a part of said ink channel for allowing a flow of ink (Fig. 10), said first member sealing the ink supply needle of the ink printing apparatus by fitting therewith (Fig. 10);

- a second member (102) contained in said ink channel elastically abutting against said first member in a direction which is the same as a direction of the sealing by said first member with said second member (Fig. 9), said second member selectively opening and closing said ink channel in conjunction with the ink supply needle (Figs. 9, 10);

- said first member comprises a protruding member (top protruding member of 104) formed on a surface thereof facing the ink chamber (Figs. 9, 10), said protruding member contacting the ink supply needle of the printing apparatus and said second member contained in said ink channel (Figs. 9, 10);

- said first member comprises a hole (hole in 104, Fig. 10) through which ink flows, said hole being surrounded by said protruding rim (Fig. 10), a diameter of said hole is smaller than that of the ink supply needle of the printing apparatus (hole presses against 162, Fig. 10);

- said second member comprises a surface facing said first member formed with a convex surface (surface of 102);

- said second member comprises a guide body (body of 102) operably allowing said second member to slide substantially vertically with respect to said packing member (Figs. 9, 10).

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Claim 58 is rejected under 35 U.S.C. 102(b) as being anticipated by Mitchell et al. (US 4,162,501).

Mitchell et al. discloses an ink supply system (Fig. 1) for a printing apparatus providing ink to a printing head through a tapered ink supply needle (39, column 5, lines 4-7), said ink supply system capable of providing ink contained in an ink chamber to the print head through the ink supply needle, comprising:

- an ink channel (ink path from chamber to print head, Fig. 1) for providing ink from said ink chamber to the print head of the printing apparatus (Fig. 1);
- a first member (37) provided at said ink channel, forming a part of said ink channel for allowing a flow of ink (Fig. 1), said first member sealing the ink supply needle of the ink printing apparatus by fitting therewith (Fig. 1);
- a second member (17) contained in said ink channel elastically abutting against said first member in a direction which is the same as a direction of the sealing by said first member with said second member (17 abuts 37), said second member selectively opening and closing said ink channel in conjunction with the ink supply needle (Figs. 1, 2); wherein said second member comprises a surface, facing said packing member, provided with a notch (61, Fig. 6).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a), which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barinaga et al. in view of Shinada et al. (US 5,790,158).

Barinaga et al. discloses all the claimed limitations except for a sealing member air-tightly closing said ink channel until said ink channel is open.

Nevertheless, Shinada et al. discloses a sealing member (546) air-tightly closing said ink channel until said ink channel is open (Figs. 15's) for the purpose of protecting the inside of the ink cartridge from the external.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Barinaga et al. with a sealing member as disclosed by Shinada et al. for the purpose of protecting the inside of the ink cartridge from the external.

***Allowabl Subj ct Matter***

3. Claim 60 is allowed.

***Reasons For Allowance***

4. The combination as claimed wherein an ink supply system including a second member comprising a guide rod extending along a direction to the ink chamber is not disclosed, suggested, or made obvious by the prior art of record.

***Response to Arguments***

5. Applicant's arguments filed May 28, 2002 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 rejection, Applicants argue that Mitchell is completely silent about a protruding member contacting any second member contained in the ink channel.

Examiner's position is that Barinaga discloses a protruding member (protruding member of 104) contacting a second member (102) contained in the ink channel (Fig. 9).

Examiner's positions regarding the new claims are discussed above.

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***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hilten can be reached at (703) 308-0719. The fax phone numbers for



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the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**MICHAEL NGHIEM**  
**PRIMARY EXAMINER**

Michael Nghiem

July 30, 2002